

REMARKS

In paragraph 4 of the final Action, claims 1-11 were rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admitted prior art in combination with Kawagishi et al., Grosclaude et al. or Kanoh et al.

In view of the rejections, claims 5 and 9 have been amended to an independent form.

A method for partially plating on a base in claim 1 of the invention comprises a coating process to coat a coating material on the base, a catalyst applying process to provide a plating catalyst on the base before or after the coating process, a processing step for processing on the base, and a coated material removing process.

In the invention, it is important that in the coating process, a water soluble polymer or hydrolyzable polymer is only applied onto a predetermined coating area of the base by injection molding the coating material on the base. After some other processing, the coating material applied on the predetermined coating area in the coating process is entirely removed by washing with liquid containing water.

In the invention, the coating material is removed by washing with liquid containing water after other processing. Since the solvent is not used in removing the coating material in the invention, a step can be simplified and a material for that purpose can be saved.

Also, in claims 5 and 9, the catalyst applying process and the coating material removing process are conducted simultaneously. Therefore, the method can be performed simply.

In the admitted prior art, it is stated that the steps of roughening, masking by screen printing and so on, catalyst applying, plating and removing the mask and catalyst are known. Also, it is known that the insulating material such as plastic or rubber is applied by injection molding to a product after providing catalyst application on the product, and if necessary, the molded portion is removed.

In the coating process of the invention, the water soluble polymer or hydrolyzable polymer is only applied onto a predetermined coating area of the base by injection molding the coating material on the base. The admitted prior art does not disclose or suggest that the water soluble polymer or hydrolysable polymer as the material for the injection molding is inject-molded as a mask for plating.

In the invention, after some other processing, the coating material applied onto the predetermined coating area of the base in the coating process is entirely removed by washing with liquid containing water. The insulating material, such as plastic or rubber, disclosed in the prior art is not removed by liquid containing water, and this removing process by water is not disclosed or suggested in the admitted prior art of the application.

Namely, in the admitted prior art, the water soluble polymer or hydrolyzable polymer is not used as the coating for plating, nor is used as the injection molding material. Also, the material used as the coating for plating is removed by washing with water.

Kawagishi et al. is directed to a local electroless plating process for plastics. In Kawagishi et al., a pasty masking composition formed of a polymer and at least one composition of a sulfur compound, nitrogen compound or silicon compound is used. In removing the masking composition, the plastic product is immersed in ethanol, methanol, or a mixture of ethanol or methanol and ammonia water to remove the masking layer. The pasty masking material is coated by applying, spraying or immersing.

In the invention, a water soluble polymer or hydrolyzable polymer is applied by injection molding on the base. In Kawagishi et al., the masking composition is formed of a polymer and at least one composition of a sulfur compound, nitrogen compound or silicon compound, and it is required that the masking composition is removed by liquid containing ethanol or methanol.

Therefore, the masking composition in Kawagishi et al. is not the water soluble polymer or hydrolysable polymer, and is not removed by water, as in the invention. The masking layer in Kawagishi et al. is not removed by water only. In the invention, the coating material applied on the predetermined coating area of the base in the coating process is removed by washing with liquid containing water. Also, the masking composition in Kawagishi et al. is not applied to the plastic product by injection molding.

Therefore, the features of the invention are not disclosed or suggested in Kawagishi et al.

In Grosclaude et al., a masking formulation is a photoinitiated coating formulation comprised of an aliphatic monomer, a cyclic vinyl amide monomer and a water soluble resin, i.e. polymeric filler, and is used as a solder resist. The formulation is applied to a substrate, and after curing the formulation, molten solder is applied and allowed to harden, and the surface is washed with water to remove the deposit.

In the invention, a water soluble polymer or hydrolyzable polymer is only applied onto a predetermined coating area of the base by injection molding the coating material on the base. In Grosclaude et al., the masking formulation applied onto a required portion is cured. In the invention, curing is not required because of the injection molding. In Grosclaude et al., the photoinitiated coating formulation is applied by coating, and is cured by light, not applied by injection molding. The features of the invention are not disclosed or suggested in Grosclaude et al.

In Kanoh et al., a hydrophilic activating catalytic solution is formed of lactate, palladium and alkaline medium. In the method, the activating catalytic solution is applied to a substrate to form a film, and the film is exposed to light to deposit palladium catalyst on the substrate. Unwanted photo-sensitive film not exposed to light is removed by water.

In the invention, the water soluble polymer or hydrolyzable polymer is only applied onto a predetermined coating area of the

base by injection molding the coating material on the base. In Kanoh et al., the catalytic solution is applied to form the film, which is then exposed to light to deposit palladium catalyst. Therefore, the water soluble polymer or hydrolyzable polymer is not formed by injection molding. What is removed by water in Kanoh et al. is the unwanted material not exposed to light, and this does not mean that the hydrophilic activating catalytic solution is water soluble after it is hardened. The features of the invention are not disclosed or suggested in Kanoh et al.

As explained above, the features in claim 1 of the invention, i.e. the water soluble material is injection-molded, are not disclosed or suggested in the cited references. Even if the water soluble material is known in the cited references, claim 1 of the present invention is not obvious from the cited references.

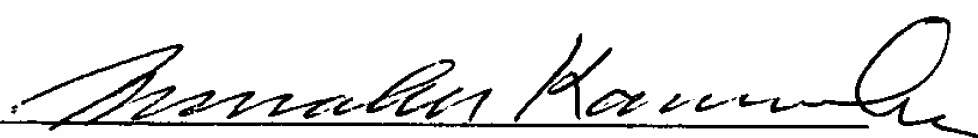
Also, in claims 5 and 9, it is specified that the catalyst applying process and the coating material removing process are conducted simultaneously. The cited references do not disclose or suggest this feature.

Reconsideration and allowance are earnestly solicited.

A one month extension of time is hereby requested. A check in the amount of \$110.00 is attached herewith for the one month extension of time.

Respectfully Submitted,

KANESAKA AND TAKEUCHI

By 
Manabu Kanesaka
Reg. No. 31,467
Agent for Applicants

1423 Powhatan Street
Alexandria, VA 22314
(703) 519-9785